

WHAT IS CLAIMED IS:

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A2

5 1. An electron-emitting device having a pair of electric conductors disposed on a substrate in opposed relationship with each other, and a pair of piled films composed chiefly of carbon and connected to said pair of electric conductors and disposed with a gap interposed therebetween, characterized in that said piled films contain therein one or more kinds of elements selected from the group of lithium, potassium, 10 sodium, calcium, strontium and barium within the range of 1 mol% to 5 mol% in terms of the percentage to carbon.

15 2. An electron-emitting device provided with a pair of device electrodes disposed on a substrate in opposed relationship with each other, electrically conductive film connected said pair of device electrodes and having a fissure between the pair of device electrodes, and a deposit composed chiefly of 20 carbon and formed in said fissure and on an area including said fissure and having in said fissure a gap of a width narrower than said fissure, characterized in that said deposit contains therein one or more kinds of elements selected from the group of lithium, potassium, 25 sodium, calcium, strontium and barium within the range of 1 mol% to 5 mol% in terms of the percentage to carbon.

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3. An electron source characterized by the provision of a plurality of electron-emitting devices according to Claim 1 or 2 disposed on a substrate, and wirings connected to said electron-emitting devices.

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4. An image forming apparatus characterized by the provision of an electron source according to Claim 3, and an image forming member for effecting image formation by electrons emitted from said electron source colliding against it.

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